



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,368	12/19/2001	Douglas Alan Gourlay	CISCP199/3486	8709
22434	7590	08/04/2006	EXAMINER	
BEYER WEAVER & THOMAS, LLP			JOO, JOSHUA	
P.O. BOX 70250				
OAKLAND, CA 94612-0250			ART UNIT	PAPER NUMBER
			2154	

DATE MAILED: 08/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,368

Applicant(s)

GOURLAY ET AL.

Examiner

Joshua Joo

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-9,11-27 and 29-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-9, 11-27, 29-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment filed 6/5/2005

1. Claims 1-2, 4-9, 11-27, 29-42 are presented for examination.

Response to Arguments

2. Applicant's arguments filed 6/5/2006 have been fully considered but they are not persuasive.

Applicant argued that:

(1) 37 CFR 1.132 Affidavit submitted 6/5/2005 overcomes the rejections of claims under 35 USC 102(e).

In response:

The affidavit does not sufficiently overcome the rejections of claims under 35 U.S.C. 102(e) because the affidavit is not a proper showing under 37CFR 1.132 that the invention disclosed but not claimed in the reference, US Patent #6,789,125, was derived from the inventor of the instant application and is thus not the invention "by another".

On the contrary, Applicant's affidavit declares that invention disclosed but not claimed in the reference, US Patent #6,789,125, is the invention by "another". For example, page 1 of the affidavit submits, "I, Douglas A. Gourlay, declare as follows: 4. I was co-inventor along with David Swason, Frederick Baker, Kenneth, Mueller, and Matthew Gnagy on the application entitled, Distributed Network Traffic Load Balancing Technique Implemented Without Gateway Router...".

Therefore, the rejections of claims under 35 U.S.C. 102(e) stand in this office action.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 4-9, 11-27, 29-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Aviani et al, US Patent #6,789,125 (Aviani hereinafter).

5. As per claims 1, 6, 7, and 8, Aviani teaches the invention as claimed including a method, a device, and a system for DNS translation, where the client is provided with a plurality of servers and directed to the server with the most optimal path, Aviani teachings comprising:

a processor (Col 6, lines 59-63. Server (Inherent));

a memory, at least one of the processor and the memory being adapted for (Col 6, lines 59-63. Server (Inherent)):

receiving a service request (Col 6, lines 50-54. Receives a service request.);

sending a plurality of packets in response to receiving the service request (Col 8, line 66- Col 9, line 4. Each server sends a response.), each of the plurality of packets identifying a different type of service via which to send the corresponding packet, wherein the type of service indicates a service provider (Col 8, lines 26-28, Col 9, lines 30-41. Response packet contains IP address of server.); and

maintaining a mapping of each different type of service to an IP address, thereby enabling the service request to be processed via an IP address associated with a type of

Art Unit: 2154

service identified in a first one of the plurality of packets to be received (Col 8, lines 35-30; Col 9, lines 30-41. Bind IP address to domain name. Col 9, lines 46-54. Server provides resolved IP address to client.).

6. As per claim 2, Aviani teaches the network device as recited in claim 1, wherein the service request is a TCP connection request or a DNS request (Col 6, lines 50-52. DNS request.)

7. As per claim 4, Aviani teaches the network device as recited in claim 1, wherein the type of service indicates a specific network connection or domain (Col 9, lines 30-47. Response contains IP address of server.).

8. As per claim 5, Aviani teaches the network device as recited in claim 1, wherein maintaining the mapping comprises maintaining a plurality of A-records, each of the A-records having a type of service field adapted for indicating a type of service and wherein receiving the request comprises receiving a DNS A-record request (Col 6, lines 50-63. Receives DNS A record request and process request. Identifies server to process request.).

9. As per claim 42, Aviani teaches the network device as recited in claim 1, wherein the type of service identifies the service provider (Col 9, lines 28-48. IP addresses correlate to different servers.).

10. As per claims 9, 23, 24, and 25, Aviani teaches the invention as claimed including the method, device, and system for processing a DNS request, Aviani's teachings comprising:
a processor (Fig. 1; Col 6, lines 59-63. Server. Processor is inherent.); and

Art Unit: 2154

a memory, at least one of the processor and the memory being adapted for (Fig. 1; Col 6, lines 59-63. Server. Memory is inherent.):

receiving a DNS request indicating a domain name for which an IP address is requested (Claims 1 and 4. Receiving DNS record request.); and

transmitting a plurality of DNS responses in response to the DNS request, each of the plurality of DNS responses being transmitted via different path associated with a different type of service, wherein the type of service identifies or is mapped to a service provider (Claim 1; Fig. 2. Causes client servers to send responses to the client device.).

11. As per claim 11, Aviani teaches the network device as recited in claim 9, wherein each of the plurality of DNS responses includes a different one of a plurality of IP addresses, each of the plurality of IP addresses being mapped to a different type of service (Claim 3. Client device communicates with a client server. Col 8, lines 25-30. DNS response contains the IP address particular to the client server.).

12. As per claim 12, Aviani teaches the network device as recited in claim 9, wherein each of the plurality of DNS responses has the same source address and destination address (Col 8, lines 20-29. Response from host server. Col 8, line 66-Col 9, line 2. DNS response to same name server.).

13. As per claim 13, Aviani teaches the network device as recited in claim 9, at least one of the processor and the memory being further adapted for: providing a service identifier identifying service provider that is to be used to route the corresponding DNS response (Claim 1. DNS response routed to client servers.).

14. As per claim 14, Aviani teaches the network device as recited in claim 9, wherein each of the plurality of DNS responses comprises a type of service field adapted for indicating a type of service to be used during next-hop based routing based on the type of service (Claim 1. DNS response routed to client servers. Col 8, line 66 - Col 9, line 8. Response routed to name server.).

15. As per claim 15, Aviani teaches the network device as recited in claim 9, wherein receiving a DNS request comprises receiving a DNS A-record request and wherein transmitting a plurality of DNS responses comprises transmitting a plurality of A-records (Col 4, line 67; Col 6, lines 52-55. DNS A record request. Column 9, lines 2-5; 36-41. Plurality of A-records.).

16. As per claim 16, Aviani teaches the network device as recited in claim 15, wherein each of the plurality of A-records includes a different IP address that is mapped to a service provider (Col 8, lines 25-29; Column 9, lines 36-41. Response contains IP addresses of particular client servers.).

17. As per claim 17, Aviani teaches the network device as recited in claim 16, wherein each of the plurality of A-records further includes a field adapted for identifying the service provider (Col 8, lines 25-29; Column 9, lines 36-41. Response contains IP addresses of particular client servers.).

Art Unit: 2154

18. As per claim 18, Aviani teaches the network device as recited in claim 17, at least one of the processor and the memory being further adapted: maintaining a table of A-records that includes the plurality of A-records (Claim 1; Col 7, lines 29-33. Record of client servers.).

19. As per claim 19, Aviani teaches the network device as recited in claim 9, wherein transmitting a plurality of DNS responses comprises transmitting the plurality of DNS responses to client DNS server associated with a client initiating the DNS request (Fig. 2; Col 8, line 66 - Col 9, line 4. DNS responses send to name server.).

20. As per claim 20, Aviani teaches the network device as recited in claim 19, wherein the client DNS server is configured to identify a first one of the plurality of DNS responses to be received from the network device (Col 9, lines 28-44. Identify first response from client server. IP address of the client server will bind with requested domain name.) and to respond to the client with an IP address of the service provider corresponding to the type of service identified in the first one of the plurality of DNS responses (Col 9, lines 46-50. Client receives IP address of the server.).

21. As per claim 21, Aviani teaches the network device as recited in claim 20, wherein the client DNS server is further configured to obtain the type of service from the first one of the plurality of DNS responses and obtain an IP address of the service provider corresponding to the type of service from a mapping table (Col 9, lines 28-44. Identify first response from client server. IP address of the client server will bind with requested domain name.).

Art Unit: 2154

22. As per claim 22, Aviani teaches the network device as recited in claim 9, wherein transmitting the plurality of DNS responses comprises transmitting the plurality of DNS responses via one or more intermediate routers configured to perform next-hop policy based routing based on the type of service (Claim 1. DNS response routed to client servers. Col 8, line 66 - Col 9, line 8. Response routed to name server. Fig. 2, Internet. Routers in data network is inherent.).

23. As per claim 26, Aviani teaches the invention as claimed including the system for selecting a service provider via which to process a client request, Aviani's teachings comprising:

a network device adapted for receiving a DNS request indicating a domain name for which an IP address is requested (Claims 1 and 4. Receiving DNS record request.) and transmitting a plurality of DNS responses, each of the plurality of DNS responses being transmitted via different path associated with a different type of service, wherein the type of service identifies a service provider (Claim 1; Col 8, line 66 – Col 9, line 2; Fig. 2. Plurality of DNS responses to the client device.);

one or more intermediate routers configured to perform next-hop policy based routing based on the type of service (Col 8, line 66 – Col 9, line 1. Responses send from client server to name server. Fig. 2, Internet. Routers in data network is inherent.); and

a client DNS server associated with a client initiating the DNS request, the client DNS server being configured to identify a first one of the plurality of DNS responses to be received from the network device (Col 9, lines 32-35. Name server identifies one of the received responses.) and to respond to the client with an IP address of the service provider identified by the type of service identified in the first one of the plurality of DNS responses (Col 9, lines 46-50. Provides resolved IP address to the client.).

24. As per claim 27, 39-41, Aviani teaches the invention as claimed including a method, device, and computer-readable medium storing instructions for establishing a TCP connection, comprising:

receiving a TCP connection request from a client (Col 5, lines 54-55. Invention may be implemented using different protocols including DNS and TCP. Col 6, lines 59-63. Receives request.);

sending a plurality of TCP acknowledgement packets to the client via a plurality of paths, each of the plurality of paths corresponding to a type of service, wherein the type of service indicates a service provider (Col 8, line 66-Col 9, line 4. Plurality of responses. Acknowledgements to request is inherent in TCP.);

receiving an acknowledgment message from the client that indicates receipt of one of the plurality of TCP acknowledgment packets sent by the network device (Transmission of acknowledgements in TCP is inherent.);

ascertaining the type of service via which the TCP acknowledgement packet received by the client was transmitted (Col 9, lines 28-47. Receives IP address of client server.); and

providing an HTTP redirect to an IP address directly corresponding to the service provider indicated by the type of service (Fig. 5; Col 9, line 66-Col 10, line 2. HTTP request.).

25. As per claim 29, Aviani teaches the network device as recited in claim 27, wherein the TCP connection request comprises a TCP packet having a synchronization flag set and wherein each of the plurality of TCP acknowledgement packets comprise a TCP packet having a synchronize flag set and an acknowledgment flag set (Synchronize flag set in TCP acknowledgment is inherent.).

26. As per claim 30, Aviani teaches the network device as recited in claim 27, wherein each of the plurality of TCP acknowledgement packets comprises a type of service field adapted for indicating a service provider (Col 8, lines 26-29; Col 9, lines 35-39. Response contains IP address of server.).

27. As per claim 31, Aviani teaches the network device as recited in claim 27, wherein each of the plurality of TCP acknowledgment packets comprise a type of service field adapted for indicating a type of service to be used during next-hop based routing on the type of service (Col 8, line 66 – Col 9, line 1. Responses send from client server to name server. Col 9; lines 30-39. Response contains IP addresses. Fig. 2, Internet.).

28. As per claim 32, Aviani teaches the network device as recited in claim 27, wherein each of the plurality of TCP acknowledgement packet includes a sequence number field, the at least one of the processor and the memory being further adapted for comprising: providing a sequence number in the sequence number field indicating an order in which the plurality of TCP acknowledgements packets are sent (Sequence numbers indicating order in acknowledgment messages are inherent in TCP.).

29. As per claim 33, Aviani teaches the network device as recited in claim 32, wherein receiving an acknowledgment message from the client that indicates receipt of one of the plurality of TCP acknowledgment packets sent by the network device comprises: receiving an acknowledgement message from the client including the sequence number of a first one of the plurality of TCP acknowledgement packets received by the client (Col 9, lines 29-41. Receives a

Art Unit: 2154

first one of plurality of packets. Acknowledgment to received sequenced number is inherent in TCP.).

30. As per claim 34, Aviani teaches the network device as recited in claim 33, where each of the plurality of TCP acknowledgement packets further comprises: a type of service field adapted for indicating a service provider via which the corresponding acknowledgement packet is to be transmitted (Col 9, line 35-40, 46-49. Response contains IP address of client server.).

31. As per claim 35, Aviani teaches the network device as recited in claim 34, at least one of the processor and the memory being further adapted for:

obtaining the sequence number from the acknowledgment message received from the client (Sequence number in message is inherent in TCP.);

determining a type of service associated with the sequence number (Col 9, lines 39-48. IP address to client.); and

ascertaining an IP address corresponding to the service provider indicated by the type of service (Col 9, lines 39-48. IP address to client.).

32. As per claim 36, Aviani teaches the network device as recited in claim 35, wherein ascertaining an IP address corresponding to the service provider indicated by the type of service comprises:

performing a look up in a mapping table, the mapping table including a plurality of IP addresses, each of the plurality of IP addresses corresponding to a different service provider (Col 7, lines 36-40. Packets send to plurality of client servers. Mapping table inherent to send packets.).

33. As per claim 37, Aviani teaches the network device as recited in claim 32, wherein each of the plurality of TCP acknowledgment packets further comprises: a type of service field adapted for indicating a service provider via which the corresponding acknowledgment packet is to be transmitted (Col 9, line 35-40, 46-49. Response contains IP address of client server.).

34. As per claim 38, Aviani teaches the network device as recited in claim 32, where each of the plurality of TCP acknowledgment packets further comprises a type of service field adapted for indicating a type of service to be used during next-hop routing based on the type of service (Col 8, line 66 – Col 9, line 1. Responses send from client server to name server. Fig. 2, Internet. Routers in data network are inherent.).

Conclusion

35. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Art Unit: 2154

36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Friday 7 to 4.

37. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on 571 272-3964. The fax phone number for the organization where this application or proceeding is assigned 571-273-8300.

38. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 24, 2006
JJ

 JOHN FOLLANSBEE
PATENT EXAMINER
TECHNOLOGY CENTER 2100